# Project Phase 2

**Database Management 308N**

**Section 111**

Team 1



Marist College

School of Computer Science

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2 February 2024

# **Table of Contents**

# **Table of Figures**

# Project Objectives

GitHub Repository Link: https://github.com/Solomon-Henry/111_ProjectTitle_Team1.git

The project we will work on is Diary Management System (DMS Project Sample 1).

Project Objective: Create a Diary Management System that allows different users to record daily events and experiences. Including the ability to add and update records.

The system will contain

- Log In:
    - Admin user and password
    - Ability to change user and password
    - Admin should have ability to add user to DMS by creating a new username and password for normal users
    - Admin should have the ability to remove user by removing username, password and other corresponding data
- Diary Records:
    - Add/Remove/Edit/Search records
    - Include time, place, duration
        - Search based on those features and list all the results on the screen
- User friendly:
    - Task overlap warnings
    - Welcome page
    - Menu with all functions for user
    - Provide reports in tabular form
    - Exit function

# Review of Related Works

## Sample 1: Schedule it – Diary Management Software

https://www.scheduleit.com/diary-software.htm

"Diary management software is a digital tool that helps individuals and businesses organize appointments, tasks, and events in a centralized calendar system, streamlining scheduling and enhancing productivity."

Positives:

- This software simplifies various planning tools into a single platform, increasing efficiency and eliminates the need for multiple platforms.
- It's user-friendly and has easy to use features like drag and drop making data management quicker and simpler.
- The software is accessible on any device, which allows users to access it anytime and anywhere.
- It simplifies business tasks by automating report generation and timesheets.
- The software also offers unlimited diaries, which means it can be used in larger organizations.

Negatives:

- It may require a lot of training due to its advanced features, which can take time and additional resources.
- This software might be too complex for smaller groups/companies because of its many features.
- It relies on a stable internet connection, which may be a problem in areas with poor connectivity. It also means that the data cannot be accessed offline.
- The software does have a free version, however, the full package which includes all the features comes at a higher cost.
- Because it is cloud-based, there may be some concerns about its level of security and data privacy.


## Sample 2: Adobe Express

https://www.adobe.com/express/create/online-journal

Adobe Express is an online journal-creation website that allows users to utilize various templates and resources in order to create their desired diary.


Positives:

- Adobe Express has a basic free version and a paid premium version if users wish to gain access to more advanced tools.
- There are plans curated for individuals, students, and businesses, which allows users to select which format best fits their needs.
- Numerous templates are available for users to employ based on how they want the diary to look.
- A section of the website is dedicated to tutorials in order to assist users in learning the available tools.
- The website has a section that focuses on social media scheduling.

Negatives:

- All diaries are stored on the Cloud; if a user wants to have the diary on the computer, they must download it.
- The diaries can only be edited on the website. Downloaded diaries are static and cannot be changed.
- The website contains numerous tools that assist in the creation of diary entries, but there are so many that it might take a user some time to master them.


**Sample 3: Day One**

https://dayoneapp.com

Day One is an application that can be used on all devices and allows users to create daily journal entries. It also lets users include any videos or pictures they want without having to worry about their privacy being compromised.

Positives:

- Free option for users that includes basic tools but can choose to purchase a subscription to have access to more advanced tools.
- Day One has security features to protect the user's data like passcodes, end-to-end encryption, and biometric security.
- Day one is accessible on almost every device with internet access.
- Users can have different journals for different purposes.
- Many customization options for the appearance of journal entries, including different fonts and formatting styles, allowing users to personalize their digital journal.
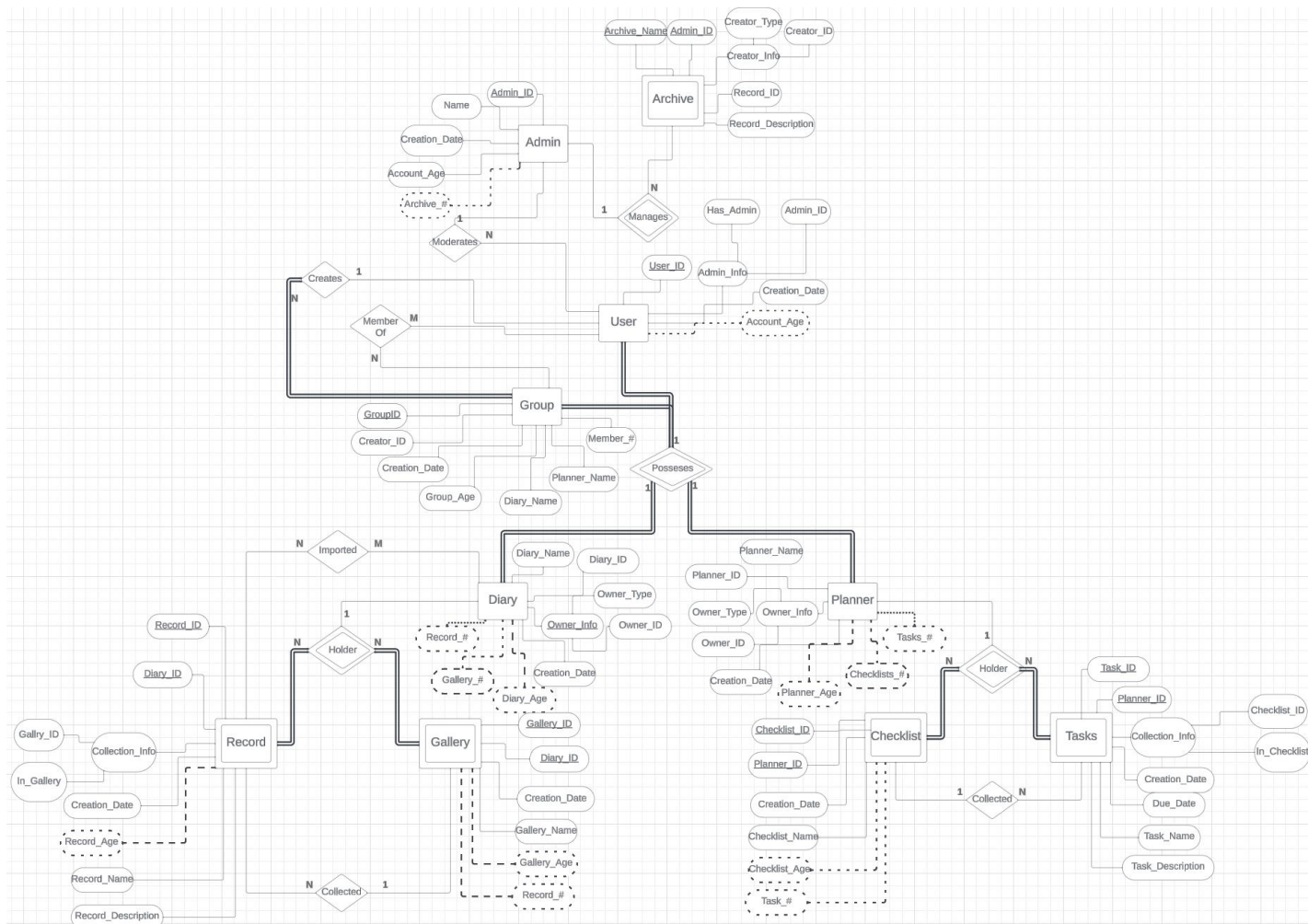
Negatives:

- The subscription can be a negative for people who want access to all the tools without having to pay or prefer one-time purchases.
- Day One depends on cloud services and internet access. Some users may not prefer this.
- Day One mainly focuses on personal journaling and doesn't really have much for collaborative use.

**<u>Merits of Our Project in Comparison</u>**:

These samples are all very similar to our Diary Management System (DMS) project, but also contain differences. First, our DMS is very alike to Sample 1, "Schedule It". Similarly to the calendar system present in "Schedule It", our DMS allows users to record daily events and save the time, place, nd duration of the record. However, our DMS is more for diary records; in comparison, this sample is more like a schedule, but both the DMS and the sample are intended to be user-friendly. For example, a menu displaying all functions for the user is available on both systems. Second, Sample 2, "Adobe Express", is like our DMS because it's an online journal-creation website intended to assist the user in the development of a desired diary. Our system also keeps diary records, but Adobe Express offers additional tutorials to provide users with the freedom to select a desired format and to assist users in learning all available tools. Our DMS does not contain tutorials and has a default setup, but its user-friendly design includes task overlap warnings, a menu with functions for the user, and a tabular form setup, Sample 3, "Day One", is an app that allows users to be able to create daily journals. Our DMS is also useful for daily journaling and will save all records with time, place and duration. Similarly, "Day One" has security features where users protect their individual accounts with usernames and passwords to enhance privacy. Our DMS does not offer customization; instead, it provides a default setup in tabular form and includes username and password functionality. While these samples are similar to our project in some aspects, our DMS is proven to have numerous differences in the features offered. These differences ultimately allow this product to stand out in comparison to the competition, thus creating an important distinction in customers' minds that will draw them to our product.

# **Entity Relationship (ER) Model**



1. <u>Describe how you created this mini world and how you selected the entities, attributes, relationships, participations, and cardinality.</u>

First, you must identify the main entities in this mini world. This includes Admin, Archive, User, Group, Diary, Record, Gallery, Planner, Tasks, and Checklist. Each entity needs attributes to describe or characterize it. For example, attributes for the admin entity are AdminID, Name, CreationDate, etc. After the entities and their attributes were identified, the relationships within the world have to be identified. Relationships were established based on interactions between entities. For example, an Admin entity might manage multiple Archives and it establishes a relationship. Participations in relationships are also identified; an Admin might participate in the manage relationship with archive partially. One of the cardinalities identified was 1-to-many between the relationship Admin and Archive.

2. <u>Provide a short description about each entity, attribute, relationship, participation, and cardinality.</u>

Admin: Represents administrators within the system who manage the platform.

Archive: Stores archived data and managed by admins.

User: Represents customers who use the system and create diaries.

Group: Represents a collection of users who may collaborate on diaries.

Diary: Represents a virtual diary owned by a user or group that contains entries.

Record: Represents individual entries within a diary and contains information like names and descriptions.

Gallery: Stores collection of records or entries for easy access or organization.

Planner: Represents a tool for organizing tasks or creating a checklist.

Tasks: Represents individual tasks or to-do items within a planner, with attributes like due dates or completion status.

Checklist: Represents a list of tasks within a planner for organizing activities.

# Enhanced Entity Relationship (EER) Model

1. <u>Provide a short description about keys and relationships.</u>

In order to best provide security to our project, a variety of keys and relationships were utilized. As can be observed in the models, specific attributes and relationships were employed in areas best suited to their specific characteristics. For example, the "Diary" entity type is connected to attributes (Diary, Diary_ID, and Creation_Date), key attributes (Owner_Info), and weak key attributes (Record_#, Gallery_#, and Diary_Age). As such, numerous keys are employed to connect these attributes in order to create viable relationships. Additionally, these connections exhibit a variety of relationship types, such as one-to-one, many-to-many, and the most common type in our model, one-to-many.


2. <u>Describe how you implemented these features on your EER model.</u>

The EER model was created based on the ER model. As such, the various keys and relationships detailed in the latter were utilized to shape the former. The EER model is designed to represent the configuration of our product and assist us in the creation of that product. As such, the keys and relationships in the EER model will be crucial to the later phases of our project.

**References**:

https://www.scheduleit.com/diary-software.htm

https://www.adobe.com/express/create/online-journal

https://dayoneapp.com